EXHIBIT 44

Recent Developments in the Market for Privately Placed Debt

This article was prepared by Mark S. Carey, Stephen D. Prowse, and John D. Rea, of the Board's Division of Research and Statistics, and Gregory F. Udell, who was a visiting economist in the division and is now at the Stern School of Business, New York University. Dana Cogswell and William Gerhardt provided research assistance.

The market for privately placed debt has undergone major changes in the past three years. Life insurance companies, the principal buyers of privately placed bonds, have significantly reduced their purchases of debt securities issued by below-investment-grade borrowers. In addition, the adoption of Rule 144A in 1990 by the Securities and Exchange Commission has spawned a new market for private debt that is similar to the public corporate bond market.

These changes have focused attention on a market that normally receives little publicity because private issuers need not publicly disclose information about themselves or their transactions. Private placements are securities that are exempt from registration with the Securities and Exchange Commission (SEC) by virtue of being issued in transactions that involve no public offerings. (Although "private placements" may be either debt or equity securities, in this article, the term refers only to privately placed debt.) In keeping with the absence of a public offering, private placements are typically offered only to a limited number of well-informed investors, usually institutions, which also generally do not disclose information about their transactions.

The private placement market has long been a significant source of long-term, fixed-rate funds for U.S. corporations. Since 1990, however, below-investment-grade borrowers have found the availability of funds in the private market to be sharply reduced, as life insurance companies have confined their acquisitions almost exclusively to investment-grade bonds. This change in the composition of their purchases has occurred because of public concern about the quality of insurers' assets and because of a regulatory reclassification in 1990 of many private placements from investment grade to speculative grade. The reluctance of insurance companies to lend to riskier borrowers, coupled with the failure of other institutions to fill the void, has shut off many medium-sized companies' supply of long-term debt financing. Because any significant return of insurance companies to this segment of the market depends on an improvement in the quality of their other assets, the availability of credit in the below-investment-grade segment of the private market may continue to be limited for some time.

The change induced in the private market by Rule 144A has occurred during the same period but is much different in nature. Rule 144A allows large, sophisticated institutions—defined as qualified institutional buyers (QIBs)—to trade private placements freely among themselves. Relying on the rule, securities firms have begun for the first time to underwrite some new issues, distributing them to QIBs. (Before the adoption of Rule 144A, the conditions under which private placements could be resold effectively prevented the underwriting of private securities.) The advent of underwritten offerings has created a market segment that has many characteristics of the public corporate bond market. This market segment differs significantly from the traditional private market, and it has proved especially attractive to foreign corporations, which can avoid the disclosure requirements of a public offering while still enjoying many of the benefits of the public market. Though the 144A market is still developing and small in size, it could

NOTE. This article is based on a forthcoming staff study by the same authors, "The Economics of the Private Placement Market."

be a major step toward the integration of U.S. and foreign bond markets.

Overview of the Private Debt Market

The private placement market has characteristics in common with both the bank loan and the public bond markets. All three markets are important sources of funds for U.S. corporations. But, as in the bank loan market, borrowers in the private placement market tend to be less well known companies that require lenders to engage in extensive due diligence and loan monitoring. As in the public bond market, private placements are securities, and their issuance is very often assisted by an agent, who provides many of the services performed by underwriters of public bonds.

Size of the Market

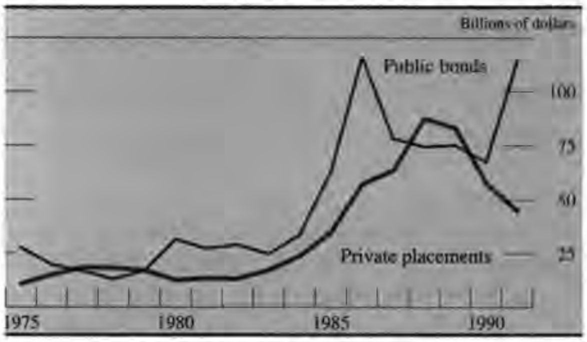
The private placement market is an important source of credit market funds for U.S corporations. Between 1986 and 1991, for example, gross issuance of private placements by nonfinancial corporations averaged $65 billion per year, or nearly 75 percent of that in the public market (table 1).[1] In 1988 and 1989, private issuance actually exceeded public issuance, as the financing of acquisitions and employee stock ownership plans boosted private offerings (chart 1). Public issuance surged in 1991, however, partly reflecting the refinancing of outstanding debt, whereas private issuance fell. The punitive prepayment penalties normally attached to privately placed debt make refinancing unattractive to issuers even when interest rates are falling.

1. Gross issuance of publicly offered and privately placed bonds by nonfinancial corporations, 1975–91
Billions of dollars, annual rate

Type of bonds	1975–80	1981–85	1986–91
Public	21.0	35.6	87.6
Private	14.7	19.8	64.8

SOURCE. Federal Reserve Board and IDD Information Services.

1. Gross issuance of publicly offered and privately placed bonds by nonfinancial corporations, 1975–91



SOURCE. Federal Reserve Board and IDD Information Services.

Comparisons of gross issuance of private placements and public bonds tend to overstate the relative importance of the private market as a source of corporate financing because private bonds generally have shorter maturities than public bonds. The median average life of private placements is between six and seven years, whereas that of public bonds is around ten years. Nonetheless, in terms of issues outstanding at year-end 1991, private placements of nonfinancial corporations stood at $250 billion. For comparison, outstandings of public bonds issued by nonfinancial corporations were $800 billion; bank loans to such corporations were $530 billion; and finance company loans to nonfinancial corporations were $150 billion.[2]

Borrowers

The typical borrower in the private placement market is a medium-sized corporation. Large firms tend to issue in the public bond market, and small firms generally borrow only in the bank loan mar-

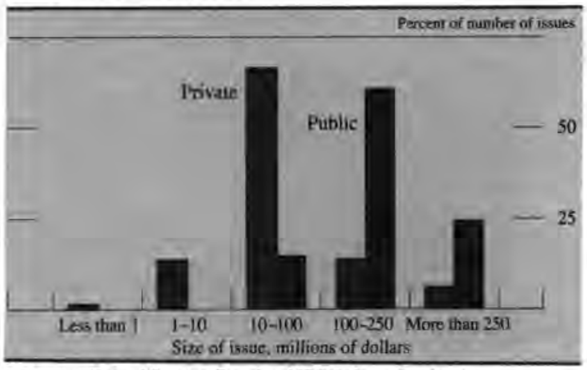
1. Data for gross issuance of private placements are from IDD Information Services, which obtains the data from a survey of investment banks and commercial banks serving as agents in placing the securities. Data for private placements that do not involve an agent are not included. Consequently, reported totals probably understate gross issuance of private placements.

2. Outstandings of public bonds of nonfinancial corporations are the sum of bonds rated by Moody's Investors Service and publicly issued medium-term notes. Private placements are estimated by subtracting the figure for public bonds from outstandings of all corporate bonds reported in the flow of funds accounts. Data for bank loans and finance company loans are from the flow of funds accounts.

ket. For a sample of nonfinancial corporations, the median value of assets for those borrowing in the private market was $0.5 billion in 1989, whereas the median for those borrowing in the public market was $1.5 billion. Because issuers are smaller in the private market, issue sizes are also smaller on average than in the public market: Nearly two-thirds of the number of all private placements in 1989 were between $10 million and $100 million, whereas more than 85 percent of the public issues were in excess of $100 million (chart 2). For the same year, the median issue size of private placements was $34 million, and the median for public bonds was $150 million.

An interaction among issue size, issuing costs, and yields is often thought to be the major reason that medium-sized firms tend to offer their securities in the private rather than in the public market. Issuance costs are lower for a private placement than for a public offering, in part because the issuer does not have to incur the considerable expense of registering the issue with the SEC. Also, most private placements, especially the smaller issues, are not underwritten and thus typically have lower distribution expenses than do public bonds, which are almost always underwritten. In contrast, for those few public and private issues that are of comparable size and quality, yields are generally higher on private placements than on public bonds. The total cost of borrowing for comparable medium-sized issues is thus generally lower in the private market because any higher coupon rate that must be paid there is offset by lower fixed costs of issuance. Total costs for comparable large issues

2. Distribution of private placements and public bonds by size of issue, 1989



SOURCE. Federal Reserve Board and IDD Information Services.

are generally lower in the public market because fixed costs are a smaller percentage of large issues. According to market participants, the break-even point between the two markets is at issue sizes between $75 million and $100 million.

Issue size, however, is not the main reason that medium-sized companies borrow in the private rather than in the public market. A more important reason is that lenders must perform extensive credit evaluations of such companies before loans can be extended to them. In any credit transaction, public or private, the lender must determine the financial condition and prospects of the borrower. For large, well-known companies, this task is facilitated by the ready availability of information from many sources. In contrast, for other, less well known companies, a lender cannot obtain information as easily and must collect the necessary information on its own. Moreover, the lender must continue in this effort after the credit is extended in order to adequately monitor the borrower's ability to make timely payments of interest and principal. Because of the information problems that less well known companies present to lenders, they are sometimes referred to as information-problematic borrowers.

As a general rule, investors in securities sold in the public bond market are not staffed to analyze information-problematic borrowers, whereas lenders in the private placement market are capable of performing this type of credit analysis. A negative correlation between company size and the degree of informational problems accounts for the differences in the typical sizes of companies borrowing in the private and public markets. Thus, even if total costs for small issues were not lower in the private market, most medium-sized companies would not have access to the public market because of the information problems they pose for lenders.

Small firms are typically even more information-problematic than medium-sized firms. Small firms are seldom able to issue long-term, straight, unsecured debt because the credit risk involved in lending to them cannot be reliably evaluated over a long term. They thus borrow mainly in shorter-term markets, principally the bank loan market, rather than in the private market. Because banks are willing to lend to more information-problematic borrowers, their credit evaluation and monitoring organizations are typically even more extensive than those of insurance companies.

Issuance costs are also a factor tending to exclude small businesses from the private debt market. The fixed fees involved in placing debt privately make very small issues uneconomical, especially in comparison to bank loans. Furthermore, most buyers of private placements have little interest in small issues. Consequently, few private placements are less than $10 million in size.

Although information-problematic borrowers are generally not large firms, many large corporations have issued in the private market. Such companies normally issue straight debt in the public bond market but turn to the private market for complex transactions. In these cases, the transactions themselves, rather than the borrowers, are difficult to evaluate. Examples of such transactions are project financings, capitalized equipment leases, joint ventures, and new forms of asset-backed securities. Apart from information problems, other special circumstances can lead large corporations to use the private market. A corporation may wish to issue debt quickly or to maintain confidentiality by avoiding the disclosures required for a public offering, or it may wish to include customized features, such as delayed disbursements of funds, in the terms of the offering.

Besides being able to accommodate information-problematic and specialized transactions, the private placement market offers borrowers the opportunity to establish relationships with lenders. The primary disadvantages of private placements in borrowers' eyes are the restrictive covenants and stiff prepayment penalties typically found in private debt contracts. These penalties effectively eliminate a borrower's option to cut interest costs by refinancing debt when market interest rates otherwise would permit.

Lenders

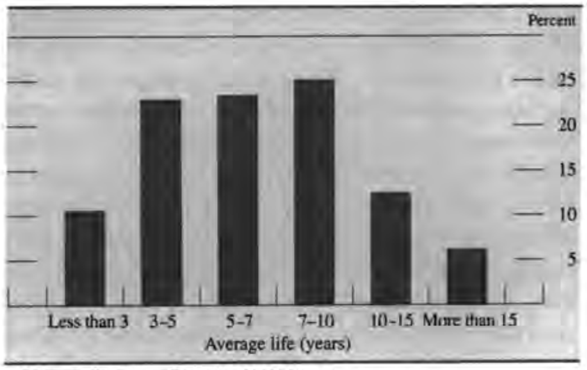
The major lenders in the private placement market are among those financial intermediaries that specialize in lending to information-problematic borrowers. A financial intermediary is a financial institution that raises funds through the issuance of its own debt or equity and then reinvests the proceeds in financial assets. The types of financial intermediaries and their specializations vary widely. However, those in the private placement market have in common a capacity to evaluate and monitor complex credit transactions. These intermediaries can provide borrowers in the private placement market with more favorable terms than would be available in the public market partly because of their expertise and partly because they are large enough to buy significant fractions of any issue. If many investors each provided only a small part of each borrower's loan, as is typical in the public market, every investor would have to perform costly credit evaluations, and the costs would be passed on to the borrowers. Total costs are reduced when only a few intermediaries lend to information-problematic borrowers because only a few must perform credit evaluations.

The major investors in private placements are life insurance companies. At year-end 1991, they held $212 billion of private placements.[3] Holdings are highly concentrated: The top five holders of private placements have almost 40 percent of the industry total, and the top twenty hold nearly 70 percent.[4] Life insurance companies invest primarily in unsecured, fixed-rate private placements; in keeping with the longer-term nature of their liabilities, the average lives of private placements they purchase are mainly between three and fifteen years (chart 3). Insurance companies prefer private placements falling in the lower end of the investment-grade range of credit ratings (rated A and BBB or the equivalent). For example, at the end of 1991, 37 percent of insurance companies' holdings were rated BBB (chart 4), and the majority of the 46 percent carrying a higher rating were rated A. Before 1990, insurance companies also purchased substantial quantities of below-

3. This figure includes private placements of both financial and nonfinancial corporations but only those held in the general accounts of insurance companies. No estimate for those held in separate accounts is available. At year-end 1991, corporate and government bonds in separate accounts totaled $67 billion. For comparison, corporate and government bonds in general accounts totaled $810 billion at year-end 1991, of which $212 billion were private placements.

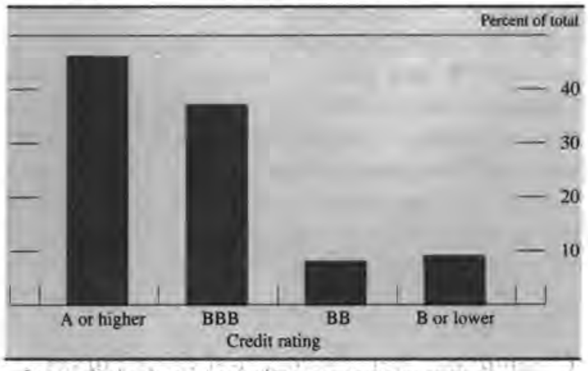
4. The top five holders of private placements hold only 25 percent of the general account assets of all insurance companies, while the top twenty hold 49 percent of all general account assets. The proportion of assets that are privately placed debt securities is naturally larger for these companies: The proportion of private placements in their general account assets is 25.4 percent for the top five and 22.7 percent for the top twenty, but only 9.6 percent for the rest of the industry.

3. Distribution of average lives of fixed-rate private placement commitments measured as a percentage of the total value of new private commitments by major life insurance companies, January 1990–July 1992



SOURCE. American Council of Life Insurance.

4. Distribution of credit ratings of private placements held by life insurance companies, 1991



SOURCE. National Association of Insurance Commissioners.

investment-grade private bonds, especially those BB-rated bonds falling just short of investment grade.

Life insurance companies are drawn to private placements by their favorable risk–return ratio. Yields on private placements are generally higher than those on comparable public bonds, the higher yield reflecting both the lack of liquidity of private bonds and a return to the more intensive credit analysis required by investors in the private market.[5] Credit risk is controlled through covenants that may limit the operations of the borrowers. For example, covenants may restrict the incurrence of additional debt, require the maintenance of a minimum level of net worth or a minimum ratio of cash flow to interest expenses, limit cash payouts to shareholders, or restrict the sale of assets. Violations of covenants serve as a warning that the financial condition of the borrower may be deteriorating.[6] Depending on the circumstances of a covenant violation, the lenders may either temporarily waive a covenant, renegotiate the terms of the security, or require immediate repayment of principal if the borrower is unable to remedy the violation. The restrictiveness of covenants is inversely related to the credit quality of the borrower. There can also be a trade-off between restrictiveness and the yield on the security. Finally, covenants tend to be more numerous and more restrictive in private placements than in public bonds, partly because of the information-problematic nature of borrowers in the private market. The smaller number of investors in private placements also makes negotiation after violations of covenants more manageable.

Life insurance companies attempt to match the duration of their investments in private placements to the duration of their liabilities. Private placements provide flexibility in this regard because maturities and sinking-fund provisions can be tailored to meet specific needs. In addition, private placements are seldom prepaid because they have strong call protection. In 1991, for example, almost 20 percent of the private bonds purchased by the largest life companies were noncallable. Another 70 percent had prepayment provisions that not only enable the insurance companies to replace any redeemed bonds at no reduction in interest income but that also require issuers to pay a penalty in the event of prepayment. Consequently, the primary reason a borrower prepays a private placement is to escape the confines of restrictive covenants.

The most important investors in private placements other than insurance companies have been finance companies and pension funds. Finance companies specialize in the highest-risk private

5. The insurance companies are able to profit from any illiquidity premium because they hold most private placements to maturity.

6. Many violations of covenants are not associated with deterioration of financial condition. Often a borrower whose condition has not deteriorated will wish to make investments or acquisitions that are forbidden by covenants. In such circumstances, the borrower will attempt to negotiate a waiver of the covenant by the lender.

placements and, consequently, usually require collateral and equity features such as warrants or options to convert bonds to equity. Most investments in private placements by finance companies are held by only about a half dozen large firms. Similarly, only a handful of pension funds are active investors in private placements. Most pension funds are geared primarily toward investing in public bonds and have not built up staff to perform the credit analysis and monitoring that is required of investors in private placements.

Origination, Negotiation, and Distribution

Most issuers of private placements enlist the services of an agent, typically an investment bank or commercial bank, for advice and assistance in selling the securities. Initially, the agent helps the issuer to prepare an offering memorandum, which contains information about the issuer's business, financial condition, and prospects, and a term sheet, which contains the proposed terms of the offering. Both are sent to prospective investors, which use them to make a preliminary evaluation of the issuer's credit quality and to negotiate the final terms of the offering. Once the terms have been agreed upon, investors then verify the portrait of the issuer's business operations and financial condition painted by the offering memorandum. An investor's analysis at this stage typically includes an on-site visit to the company. From start to finish, a routine transaction takes four to six weeks to complete.

In distributing the securities, agents typically operate on a "best-efforts" basis. In contrast to an underwriter, an agent is under no obligation to purchase the securities, so the issuer is not guaranteed funds. The use of a best-efforts distribution mechanism reflects primarily the economics of placing the debt of information-problematic borrowers: The risk associated with the failure to place an issue is so great that such borrowers find bearing it themselves less costly than hiring an underwriter to bear it for them. Until the adoption of Rule 144A, underwriting was also effectively precluded because an underwriting might constitute a public offering.

Some issuers choose not to use an agent and instead place their securities directly with investors. In most cases, such direct placements are sold to lenders with which the issuer has had a previous borrowing relationship, although a few insurance companies also solicit and originate new business. One advantage of a direct placement is the saving of the agent's fee. Also, if the direct placement follows a previous transaction between the same parties, investors may be able to offer better terms and faster execution. Nonetheless, even among repeat borrowers in the private market, direct placements constitute only a minority of offerings. Agents have better information than issuers about market conditions and investors' preferences, and they are experienced negotiators. Issuers thus generally can achieve lower borrowing costs by using agents, even taking into account their fees.

Relationship to Other Markets

The private placement market is most frequently compared with the public bond market, primarily because the debt instruments issued in both markets are securities. Despite this similarity, the private placement market has much more in common with the bank loan market, even though their debt instruments are different. Borrowers in both the bank loan and private placement markets are information-problematic, and lenders in both markets are financial intermediaries specializing in credit evaluation and monitoring. Consequently, the typical medium-sized borrower in the private placement market generally views a bank loan as the closest alternative to a private placement.

A given borrower, however, would not find bank loans and private placements to be perfect substitutes, because the characteristics of financings available in the two markets typically differ. Bank loans have short and intermediate maturities, generally of no more than seven years; in contrast, private placements are intermediate to long term in maturity. Bank loans normally carry floating rates and can be prepaid at par, whereas private placements are usually fixed-rate securities with substantial prepayment penalties.[7] The differences in matu-

7. The significance of the difference in types of interest rates is lessened somewhat by the availability of interest rate swaps. Swaps are costly, however, especially for many information-problematic borrowers.

rities and types of rate prevalent in the two markets largely reflect differences in the duration of bank and life insurance company liabilities.

Because of the differences in maturities between bank loans and private placements, borrowers generally view the two forms of credit as competitive only for maturities of three to seven years. A borrower planning to raise funds in this range of maturities will compare the total cost of bank loans and private placements and base its decision on both the price and nonprice terms of the instruments.[8]

Differences in maturities across the bank loan and private placement markets also influence the characteristics of the average borrower and the terms of the average loan. As noted, it is difficult to evaluate the credit risk of very information-problematic firms, which are typically small, over the long term. Thus smaller, more-information-problematic firms are much more frequently found in the bank loan market. Because the average borrower in the bank loan market is more information-problematic, the average bank loan has more and tighter covenants than the average private placement.

The Credit Crunch

Since the middle of 1990, issuers of below-investment-grade securities have encountered a sharp contraction in the availability of credit in the private placement market. Interest rate spreads on these securities have risen significantly, indicating that the reduction in supply has been larger than any decline in credit demand associated with the weak economy. This situation has been termed a credit crunch because it has resulted mainly from a greater reluctance of life insurance companies to assume below-investment-grade credit risk. The sources of this reluctance have been the threat of redemptions by liability holders (policyholders and others), asset-quality problems, and regulatory changes.

8. This choice, as noted above, is relevant only for medium-sized firms. Small firms typically do not have access to the private placement market because they are too information-problematic.

2. Gross issuance of private placements by nonfinancial corporations, 1989–91[1]

Billions of dollars except as noted

Type of issuance	1989	1990	1991
Total issuance	54.7	49.9	42.9
Below-investment-grade	6.6	8.1	3.8
MEMO			
Ratio of below-investment-grade to total (percent)	12.1	16.2	8.9

1. Excludes restructuring-related issues in excess of $250 million and issues to finance employee stock ownership plans.

SOURCE. IDD Information Services.

Issuance and Yields

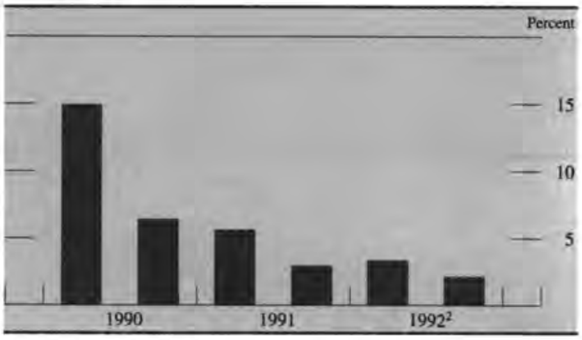
Evidence of reduced credit availability can be seen both in the volume of issuance of below-investment-grade private placements and in spreads between yields on investment-grade and below-investment-grade private bonds. Gross issuance by below-investment-grade, nonfinancial corporations fell more than 50 percent in 1991, a much steeper drop than that by investment-grade corporations (table 2).[9] As a percentage of gross offerings, below-investment-grade issuance declined from 16 percent in 1990 to 9 percent in 1991. Although data for 1992 are not yet available, preliminary information suggests that the low volume of low-grade issuance persisted last year.

Information available since 1990 from a survey of major life insurance companies by the American Council of Life Insurance (ACLI) confirms the decline in gross issuance of low-grade private placements and points to a significant restructuring in the composition of life insurers' holdings of private placements.[10] Although total commitments to purchase private placements remained roughly constant from early 1990 through mid-1992, the proportion of below-investment-grade issues dropped sharply in the middle of 1990 and declined further in the second half of 1991 (chart 5). Over

9. Gross issuance excludes offerings to finance employee stock ownership plans (ESOPs) and restructurings. Underlying developments are more evident with their exclusion, as both were heavy in 1989 but fell off sharply in 1990 and 1991.

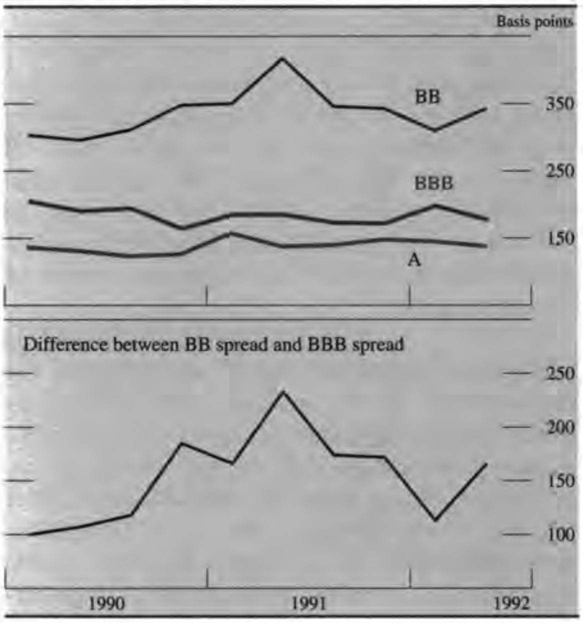
10. Respondents to the survey hold approximately two-thirds of all private placements in the general accounts of life insurance companies.

5. New commitments to purchase below-investment-grade private placements as a percentage of total new commitments by major life insurance companies, 1990–92[1]



1. Data are semiannual.
2. 1992:H2 is July at a semiannual rate.
SOURCE. American Council of Life Insurance.

6. Yield spreads on privately placed corporate bonds, 1990–92:Q2[1]



1. Data are quarterly weighted averages.
SOURCE. American Council of Life Insurance.

the entire period, the share of below-investment-grade securities in total commitments fell from 15 percent to 3 percent.

The reduced rate of gross purchases indicated by the survey is also evident in insurance companies' holdings of below-investment-grade securities. Holdings of such securities at all life insurers fell 11 percent in 1991, while holdings of investment-grade securities rose nearly 12 percent. As a result, speculative-grade private bonds as a percentage of all private placements in insurance company portfolios declined from 19.8 percent in 1990 to 16.4 percent in 1991. The low rates of commitments to purchase below-investment-grade private issues reported in the 1992 ACLI surveys suggest that the insurance industry pared holdings further last year.

Accompanying the decline in gross issuance and outstandings has been a sharp increase in yield spreads on below-investment-grade private placements. According to market reports, before 1990 the difference between yields on BB (below investment grade) private placements and BBB (investment grade) private placements, otherwise having comparable terms, was about 100 basis points; since then, the difference has been as high as 250 basis points. Although data are unavailable for periods before 1990, the relative movement in yields on private bonds rated BB and BBB is confirmed in the spreads reported in the ACLI survey (chart 6).[11] During the first half of 1990, the spread between yields on BB private placements and comparable Treasury securities was about 300 basis points, compared with 190 basis points on BBB private placements. From that point, the spread on BB bonds moved up to almost 425 basis points in the second quarter of 1991, although in the second quarter of 1992 it retreated to around 350 basis points. During the same period, the BBB spread drifted down to 180 basis points. Similarly,

11. Care must be used in interpreting the reported spreads. Although they are transaction prices, they do not reflect a standardized security. The nonprice terms of private placements can differ widely for bonds carrying the same credit rating, and the terms affect the yields. For example, in early 1992, the difference in spreads between the highest-risk BB issue and the lowest-risk BB issue reportedly was as much as 150 basis points. Under normal circumstances, averaging spreads within a rating category produces a representative spread for that rating. However, as most of the BB bonds issued since mid-1990 probably were at the least risky end of that risk range, the increase in the BB spread shown in chart 6 likely understates the actual increase.

the spread on A-rated private placements varied little over the past three years.[12]

Sources of the Credit Crunch

The combination of a decline in gross issuance of below-investment-grade private placements and an increase in spreads over Treasuries since mid-1990 is consistent with a decrease in the supply of loanable funds to this sector. Although the demand for funds surely declined with the falloff in general economic activity during the period, the increase in spreads in this market segment indicates that a much greater reduction occurred in the supply of funds.

A contraction in supply, however, does not necessarily imply a credit crunch, as credit availability can decrease and lending terms tighten for many reasons, such as an increase in the riskiness of borrowers. In general, a credit crunch occurs when, for a given price of credit, lenders substantially reduce the volume of credit provided to a group of borrowers whose risk is essentially unchanged. That is, a credit crunch is caused by a reduction in lenders' willingness to make risky investments or by a "flight to quality" by lenders. A credit crunch always involves a reduction in the supply of credit; it does not necessarily involve an increase in interest rates paid by borrowers, because a reduction in the volume of lending may be accomplished by nonprice rationing.

This definition of a credit crunch does not include a reduction in supply that is a response to a recession or an economic slowdown. In such circumstances, the riskiness of borrowers normally increases. Lenders demand compensation either in the form of higher interest rates or tighter nonprice terms of loans. Although borrowers may characterize such a reduction in credit supply as a credit crunch, such a characterization is not appropriate because the decrease in credit is a normal response of lenders to changing economic conditions.[13]

A credit crunch can occur for several reasons. It may result from actions taken by regulators that affect lenders' ability or incentive to assume certain risks. It may also result from internal developments at lending institutions, such as unexpectedly large loan losses, that cause portfolio rebalancings involving greater conservatism in lending. For lenders that are financial intermediaries, a credit crunch may result from concerns of liability holders about the intermediaries' financial condition. The ability of intermediaries to raise funds to support their investment activity may be adversely affected in such circumstances, leading to their adoption of more conservative investment strategies to restore public confidence.

All these reasons appear to have played a role in the withdrawal of life insurance companies from the below-investment-grade sector of the private placement market. The regulatory change, which was adopted by the National Association of Insurance Commissioners (NAIC) in June 1990 and became effective at the end of that year, introduced finer distinctions in the NAIC's credit ratings of corporate bonds, including private placements. Under the old rating system, many securities, especially public bonds, with credit quality equivalent to BB or B received an investment-grade rating. To correct this shortcoming, the NAIC adopted a rating system with categories more closely aligned with those in the public market (table 3). Although insurers' actual holdings were probably little changed, the reclassification resulting from the new system caused insurers' reported holdings of below-investment-grade bonds, both private and public, to rise from 15 percent of total bond holdings to 21 percent between 1989 and 1990. The level of reported holdings of high-yield bonds jumped more than 40 percent.

12. In the public high-yield bond market, spreads increased sharply from mid-1989 through 1990 but have since fallen significantly, although they remain above the levels that prevailed in early 1989. Issuance of public junk bonds stopped almost completely during 1990 and most of 1991 but surged in 1992 to the second highest level ever. Thus, experience in the public junk bond market has been significantly different from that in the market for below-grade private debt.

13. Some economic theories and empirical studies suggest that a significant amount of nonprice rationing of credit occurs even during normal times and that this rationing becomes much more extensive during economic downturns as borrower risk increases. The increase in nonprice rationing is sometimes referred to as a credit crunch. Such a mechanism may have operated to reduce credit availability in the private market during the period of interest here, but it is different and probably less important in explaining recent experience in the below-investment-grade segment of the private market than the reduction in lenders' willingness to bear risk.

3. NAIC credit ratings

NAIC rating designation	Equivalent rating-agency designation
Old system[1]	
Yes	AAA to B
No*	BB, B
No**	CCC or lower
No	In or near default
New system[2]	
1	AAA to A
2	BBB
3	BB
4	B
5	CCC or lower
6	In or near deafult

1. The asterisks appended to the "No" ratings are part of the rating designation.
2. Effective December 31, 1990.
SOURCE. Securities Valuation Office, National Association of Insurance Commissioners.

The sudden appearance of a much increased percentage of below-investment-grade securities on the balance sheets of life insurance companies focused the attention of policyholders and other holders of insurance company liabilities on the composition of insurers' bond holdings. As evidence of increased public sensitivity, a recent study found that stock prices of insurance companies with high concentrations of junk bonds were adversely affected in early 1990 by the publicity surrounding the financial problems of First Executive Corporation, whose insurance units subsequently failed because of losses on junk bonds. In contrast, stock prices of insurance companies with little exposure to junk bonds were not affected.[14] The public's greater sensitivity to the quality of life insurance companies' assets discouraged many insurers from purchasing lower-quality private placements out of fear that they might lose insurance business to competitors with lower proportions of below-investment-grade bonds in their portfolios.[15]

High proportions of poorly performing commercial mortgages in insurance company portfolios are another factor causing the reduced availability of credit to below-investment-grade borrowers. Commercial mortgages make up 25 percent of general account assets at the twenty largest insurance companies, which include most of the major participants in the private placement market. Additional exposure to commercial real estate risk comes from direct real estate investments, which at many life insurance companies consist primarily of real estate–related limited partnerships. Delinquency and foreclosure rates on these commercial real estate investments have risen sharply over the past two years, as the press has widely reported. These problems have further heightened public awareness of the financial problems of life insurance companies and have thus added to the pressure on those with significant holdings of commercial real estate loans to shift out of all lower-quality assets. Also, because even sound commercial real estate loans have turned out to be riskier than anticipated at the time they were made, life insurance companies have shifted investments toward high-quality assets.

A final development pressuring insurance companies to restrict purchases of below-investment-grade private placements has been the concern of credit rating agencies about the lack of liquidity of private placements, especially below-investment-grade ones. This concern appears to be a consequence of the July 1991 collapse of Mutual Benefit Life Insurance Company, which lacked the liquidity needed to meet heavy redemptions by policyholders. Driven by a fear of being downgraded, insurance companies have sought more liquidity in their bond portfolios by concentrating on higher-grade credits, which are more readily sold in the secondary market.

The individual importance of these three factors as causes of the credit crunch is hard to isolate, although all three certainly contributed. They are, however, interrelated. For example, the new NAIC rating system probably would have had a much smaller effect if insurance companies had not experienced problems with commercial real estate loans. Furthermore, the new rating system, combined with the failure of First Executive, served to focus public attention on the potential riskiness of below-investment-grade private placements. In any case, the main impetus behind the credit crunch has been a perception by life insurance companies that

14. See George Fenn and Rebel Cole, "Announcement of Asset-Quality Problems and Stock Returns: The Case of Life Insurance Companies," in *Proceedings of the 28th Annual Conference on Bank Structure and Competition* (Federal Reserve Bank of Chicago, 1992), pp. 818–42.

15. Another regulatory change raised reserves held against some below-investment-grade bonds and lowered reserves on bonds rated A or higher. Also, the time allowed to reach the mandatory reserve levels was shortened. Of the two regulatory changes, the new structure of ratings likely had the greater effect on insurance companies' willingness to hold below-investment-grade bonds because many companies had sufficient reserves to meet the fully phased-in standards.

liability holders might lose confidence in them and redeem insurance policies, annuities, and guaranteed investment contracts.

Outlook and Alternative Sources of Credit

As a group, life insurance companies are not likely to resume investing in below-investment-grade private placements at pre-1990 levels until their asset problems have improved and public concern about the health of the industry has diminished appreciably. As this improvement hinges mainly on a recovery of the commercial real estate market, many analysts expect that insurers will remain reluctant to provide funds to the low-grade sector of the private market for the foreseeable future. This prospect has already led some insurers to cut staff and to reduce resources devoted to credit evaluation and monitoring. If the cutbacks become widespread, the long-run ability of the insurance industry to supply credit to medium-sized, below-investment-grade companies could be severely impaired.

Risk-based capital standards, which become effective at the end of 1993, could reinforce the reluctance of insurance companies to buy below-investment-grade securities. The new standards are aimed at measuring the prudential adequacy of insurers' capital as a means of distinguishing between weakly capitalized and strongly capitalized companies. To this end, insurance companies will report the ratios of their book capital to levels of capital that are adjusted for risk. As an insurer's ratio falls progressively below one, successively stronger regulatory actions will be triggered.

In the current environment, most insurers will probably attempt to achieve ratios in excess of one. One way insurers can raise their risk-based capital ratios is to shift into low-risk assets. In this regard, below-investment-grade securities carry risk weights much higher than those on investment-grade bonds and even commercial mortgages. Over time, however, as the financial condition of insurance companies improves and public concern about their health recedes, insurers will be more inclined to consider risk-adjusted returns in reaching investment decisions and thus may allocate a greater proportion of assets to higher-risk categories, such as below-investment-grade bonds.

Despite the almost three-year absence of insurance companies from the below-investment-grade sector and the persistence of high spreads, other institutions have not picked up much of the slack. New lenders must bear the costs of investment in credit analysis capabilities. Startup costs may account for the failure of pension funds to fill the gap, even though their demands for long-term, fixed-rate investments appear to make them natural investors in private placements. Few funds currently have the staff of credit analysts needed to support significant lending in the below-investment-grade private market. Most pension funds also are reluctant to make long-term investments in a market with which they are unfamiliar.

Another way for pension funds as well as others not currently investing in private placements to enter the market is through managed investment funds. Although several funds have been formed in the past two years, they are not likely to expand to a scale sufficient to fill the void left by the insurance companies, in part because pension fund managers are reportedly reluctant to invest even indirectly in a market with which they are unfamiliar. Insurance companies, which would be the primary source of the managerial resources necessary for operation of managed private placement funds, have thus far not set up funds on a large scale, even though some companies currently have excess capacity to analyze and monitor lower-quality credits. Some of them are unwilling to make a long-term commitment of resources to this effort because they expect to eventually resume investing in below-investment-grade private placements for their own accounts. Also, most institutional investors expect insurance companies acting as investment managers to purchase some of the securities for their own accounts. Such a requirement lessens the incentive to establish managed funds because of insurers' current aversion to purchasing below-investment-grade bonds.

Nor have other institutions appreciably stepped up their lending in the below-investment-grade sector of the private market. Finance companies' participation has traditionally been in the highest-risk segment of the market, a segment in which life insurance companies are not generally active. Insurers typically made unsecured loans, mainly to the highest-quality speculative-grade borrowers. In contrast, finance companies specialize in secured

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lending, normally with equity features attached. Thus, the risk-return profile of the typical insurance company borrower does not suit finance companies, nor would such borrowers generally find finance companies' terms attractive.

Confronted with few opportunities to borrow in the private market, below-investment-grade companies have turned to various alternatives. Some have elected to borrow from banks, even though bank loans are imperfect substitutes for private placements because of their shorter maturities and floating interest rates. By doing so, these companies have forgone the opportunity to refinance shorter-term debt with longer-term private placements, and some have also found that banks have significantly tightened terms. Other low-rated companies have issued equity, taking advantage of favorable stock market conditions in 1991 and early 1992. In some cases, the improved financial condition resulting from equity injections has raised issuers' credit ratings to investment grade, giving them renewed access to the private bond market.[16] The public junk bond market, despite its revival in the latter half of 1991, has not been a source of funds for the typical below-investment-grade private issuer, which is generally too small and too complex a credit for the public market.

Effect of Rule 144A on the Private Placement Market

The adoption of Rule 144A by the SEC in April 1990 paved the way for the development of a new market for private debt that is much more like the public bond market than the older or traditional private placement market.[17] Rule 144A permits unrestricted secondary trading of private placements among sophisticated institutional investors, designated in the rule as qualified institutional buyers (QIBs). As a general matter, sellers of outstanding private placements must take steps to ensure that the sales do not indirectly constitute a public offering, which would violate the basis for the exemption from registration with the SEC. Under Rule 144A, QIBs are not viewed as being a part of the public, and thus they can freely trade private placements among themselves. This treatment of QIBs made it clear that securities firms could underwrite new issues of private placements, as long as the securities were sold to QIBs. Before the adoption of Rule 144A, private placements were not underwritten, as the underwriters' sales of the securities to investors might have been interpreted as a public distribution.

In the aftermath of Rule 144A, securities firms have begun to underwrite private placements on a firm commitment basis, sparking the development of the new 144A market. More specifically, the ability to underwrite private placements means that for the first time debt can be distributed in the private market much as it has been in the public market. Consequently, "public-like" borrowers with a desire to avoid public registration now have an alternative to both the public market and the traditional private market. The emergence of the 144A market thus bridges a gap between the public and private markets, providing a more efficient means for large borrowers that do not have the informational problems of the typical issuer of private debt to issue in the private market.

The SEC's purposes in adopting Rule 144A were twofold. One purpose was to increase market liquidity. The other was to draw more foreign issuers to the private placement market by increasing liquidity and thus lowering the differential between private and public interest rates. Foreign companies had not been frequent issuers in public markets primarily because they found the registration requirements expensive and burdensome, especially the stipulation that financial statements be reconciled with generally accepted accounting principles in the United States.[18] Although foreign companies have long been able to bypass these obstacles by issuing debt in the private market,

16. Some analysts have suggested that a new rating system for private placements recently introduced by Standard and Poor's (S&P) may permit some marginal companies to achieve an investment-grade rating. In contrast to many other rating schemes, S&P's new system considers covenant protection in assigning a rating.

17. Rule 144A applies to both debt and equity securities; however, the discussion deals only with debt securities.

18. Despite appearances, the burden of registration and disclosure requirements may not be as great as perceived by many potential foreign issuers. See Charles E. Engros, Jr., "United States Private Placements," (client memorandum, Lord Day & Lord, Barrett Smith, New York, N.Y., January 1992), pp. 5–9.

they had not done so to any great extent, in part because of the higher yields on private placements. The negotiation of terms and frequent inclusion of restrictive covenants in private debt also made the private market unattractive to foreign companies.

The SEC justified the removal of the resale restrictions on trades between QIBs on the grounds that the Congress had never considered sophisticated, institutional investors to need the protection offered by the registration of securities. Rather, the purpose of registration was to protect unsophisticated, individual investors. The SEC therefore concluded that if secondary transactions involved only sophisticated investors, such transactions would not constitute a public distribution and thus could be carried out without restriction.[19]

As defined in Rule 144A, QIBs are financial institutions, corporations, and partnerships owning and investing on a discretionary basis at least $100 million in securities.[20] The scope of this definition is broad enough to include life insurance companies, pension funds, investment companies, foreign and domestic banks, master and collective bank trusts, and savings and loan associations. Besides meeting the securities test, banks and savings and loans must have net worth of at least $25 million, a condition imposed by the SEC because it believed that securities holdings alone did not necessarily reflect the appropriate degree of investor sophistication for institutions having insured deposits.[21] In contrast to other institutional investors, broker–dealers must own only $10 million of securities to qualify as a QIB. The SEC opted for the lower level to avoid excluding a significant number of broker–dealers that were actively participating in the private market.[22]

Besides requiring that transactions be confined to QIBs, Rule 144A stipulates that three other conditions must be met. First, to ensure the availability of a minimal amount of information, an issuer must provide buyers with copies of its recent financial statements and basic information about its business. Second, when issued, privately placed securities must not be of the same class as any of the issuer's securities already traded on a U.S. stock exchange or on the NASDAQ system. This requirement is intended to prevent the development of an institutional market in publicly traded securities. Third, the seller of 144A securities must take "reasonable steps" to inform the buyer that the sale is occurring pursuant to Rule 144A.

Size of the 144A Market

The 144A market is still developing and consequently is small compared with the traditional private market and, especially, the public bond market. In 1991, the first full year Rule 144A was in place, gross issuance of 144A securities was $17 billion, representing about 20 percent of the volume in the traditional market (table 4).[23] Offerings were up significantly from roughly $2 billion in 1990, but, of course, the rule was in effect only for part of that year, and time was required to bring issues to market after its adoption. Preliminary press reports suggest that the volume of issuance perhaps doubled during the first half of 1992; in contrast, non-144A issuance was down significantly during that period.[24]

19. U.S. Securities and Exchange Commission, *SEC Docket*, 42 (November 1988), pp. 97–102.

20. Bank deposit notes and certificates of deposit, loan participations, repurchase agreements, and currency and interest rate swaps are excluded. When Rule 144A was adopted, the SEC also excluded U.S. government and agency securities, but amendments to the rule in October 1992 removed this exclusion.

21. U.S. Securities and Exchange Commission, "Resale of Restricted Securities; Changes to Method of Determining Holding Period of Restricted Securities under Rules 144 and 145: Final Rule, Rule Amendments and Solicitation of Comments" (April 23, 1990), pp. 17–20.

22. SEC, "Resale of Restricted Securities," p. 21.

23. These data include all securities issued using the documentation for a financing pursuant to Rule 144A. As a consequence, both underwritten and non-underwritten private placements are included in the data. Unfortunately, the two cannot be separated, although it is the underwritten securities that primarily constitute the new 144A market. Market estimates of underwritten offerings for 1991 go as high as more than $3 billion. See Michael Vachon, "Underwritten Issues Could Spur Expansion of the Rule 144A Market," *Investment Dealers' Digest*, vol. 58 (January 6, 1992), pp. 13–14. The pace of underwritten offerings was reportedly much faster in 1992, with one estimate placing the volume during the first half of 1992 at $2.5 billion. See Victoria Keefe, "Underwritten 144A Deals Surge," *Corporate Financing Week*, vol. 18 (August 31, 1992), pp. 1 and 10.

24. Michael Vachon, "Too Much Cash, Too Few Deals," *Investment Dealers' Digest*, vol. 58 (August 31, 1992), pp. 23–24.

4. Gross issuance of debt in public and private markets, 1989–91
Billions of dollars

Market	1989	1990	1991
Rule 144A private placements	...	2	17
By foreign issuers	...	*	6
Traditional private placements	135	95	76
By foreign issuers	20	16	13
Public bonds	189	204	307
By foreign issuers	9	15	20

* Less than $500 million.
SOURCE. IDD Information Services.

Characteristics of 144A Securities

Underwritten offerings of 144A securities now have many of the features of publicly offered bonds. The terms and documents generally conform to the standards used in the public market; in particular, the bonds have "public style" covenants, which are fewer in number and considerably less restrictive than those found in many traditional private placements. Many components of issuance costs are the same as those in a public offering, although the issuer does avoid the considerable expense associated with public registration. Underwritten 144A securities also have two credit ratings, are not highly structured, and are usually transferred through the book-entry system operated by the Depository Trust Company. In many instances, offering memoranda have been styled to be similar to prospectuses used in public offerings. This procedure has been followed primarily as a part of the underwriters' efforts to market the private placements to traditional public-market investors, such as mutual funds, pension funds, and groups within insurance companies that invest in public bonds.[25] The average size of underwritten private placements has been comparable to that of public offerings. Finally, the terms of the securities are not negotiated with investors but are set before the offering.

Despite the similarity to public bonds, underwritten 144A securities as a group still differ from public bonds, especially with regard to liquidity, and thus their yields on average contain a premium.[26] In the first year of the market, the premium was reported to be about the same as that on traditional private placements. Recent reports suggest, however, that the liquidity of 144A securities has increased and that the premium has decreased as major dealers have allocated capital and traders to making markets for 144A securities.[27]

Foreign Issuers

Thus far, foreign issuance has made up a much larger proportion of the 144A market than it has of either the traditional private or public bond markets. Of the $16.7 billion of 144A offerings in 1991, foreign companies or their U.S. subsidiaries were responsible for about one-third (table 4). In contrast, foreign issuers placed only 16 percent of offerings in the traditional private market, and only 7 percent of public offerings were foreign related. Preliminary data for the first half of 1992 suggest that foreign issuance likely made up an even larger share of the 144A market last year.[28]

Several factors appear to lie behind foreign use of the 144A market. One is that the adoption of Rule 144A itself served to publicize the already existing advantages of the private placement market to foreign companies. The effect of the rule has thus been to alter foreigners' perception that all offerings in the United States were subject to excessive regulatory burdens. Moreover, since adoption of the rule, investment banks have devoted more effort to bringing foreign issuers into the private market. A second factor boosting foreign issuance has been the low level of yields in the United States relative to European countries. The 1992 increase in foreign issuance in the public bond market to a record level attests to the yield advantage of U.S.

25. See Vachon, "Too Much Cash," pp. 23–24.

26. Some additional reasons for the premium are that lenders typically demand a slightly higher rate from foreign issuers and also from first-time issuers.

27. See Keefe, "Underwritten 144A Deals Surge," p. 10.

28. The foreign share of the 144A market could be higher than indicated because the data do not always list U.S. subsidiaries of foreign corporations as foreign issuers. Other sources of information, in fact, give foreign issuers a larger share of the 144A market. See Moody's Investors Service, "Recent Developments in the 144A Private Placement Market: A Rating Agency Perspective," *Moody's Special Comment* (New York, N.Y., February 1992) and U.S. Securities and Exchange Commission, "Staff Report on Rule 144A" (September 30, 1991).

markets. A final factor is that the premium in yields on foreign bonds issued in the private market has reportedly declined.

Domestic Issuers

Although foreign use of the 144A market has received considerable attention, domestic issuance has also been significant. In 1991, U.S. companies accounted for about two-thirds of the volume, and they likely maintained their presence in 1992.

Domestic issuers in the 144A market typically are larger companies with special circumstances that preclude issuing in the public bond market. In some cases, the companies are not registered with the SEC and do not want to incur the time and expense required to register securities. Among these are private companies that, in the past, have borrowed in the traditional private market but now find more favorable pricing and terms in the 144A market. Also included are unregistered subsidiaries of publicly registered parents that are issuing debt in the subsidiaries' names. In other cases, companies with outstanding public securities have turned to the 144A market to protect the confidentiality of the specific circumstances leading to the borrowing, or they have highly structured transactions that are more easily accommodated in the private market. As these examples imply, unless special circumstances are involved, borrowing costs generally are lower in the public bond market.

Investors

In the first year and a half after the adoption of Rule 144A, life insurance companies made up the largest single group of investors in 144A private placements, purchasing nearly 75 percent of all nonconvertible debt, according to estimates compiled by the SEC. The second largest group of buyers during this period was mutual funds, accounting for a little more than 10 percent of the volume of nonconvertible debt.[29] More recently, mutual funds have reportedly invested more, whereas the share of life insurance companies has diminished.[30]

The changing role of mutual funds and life insurance companies is consistent with press reports that buyers of 144A securities are increasingly those that have traditionally invested primarily in public bonds, such as mutual funds and those groups in insurance companies that specialize in purchasing public bonds.[31] The 144A market is attractive to public-market investors because it offers corporate bonds that are similar to public issues and because it offers bonds issued by foreign corporations. In addition, yields are higher on 144A private placements than those on comparable public issues, although, as noted, this premium exists mainly to compensate investors for the lesser liquidity and other unique characteristics of private placements.

Despite these favorable aspects of 144A securities, pension funds, one of the largest groups of investors in public bonds, have not been significant buyers of 144A securities. Their absence from the 144A market may result from restrictions on their ability to purchase foreign securities, as well as from the lack of familiarity of many fund managers with the private placement market and the significance of Rule 144A. Also, the SEC initially excluded bank trusts from its definition of qualified institutional buyers. In October 1992, however, the SEC amended the definition to include trusts managing employee benefit plans, which may increase the participation of pension funds.

In contrast to the interest shown by public-market investors in the 144A market, buyers of traditional private placements are unlikely to find this market attractive. The comparative advantage of traditional investors is credit analysis and credit monitoring, neither of which are required to the same extent in the 144A market or in the public market. Market liquidity is of less value to them because they are generally buy-and-hold investors.

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29. At the time Rule 144A was adopted, the SEC took deliberate steps to foster the participation of mutual funds in the 144A market. One change permitted a family of mutual funds to aggregate the holdings of all its funds in determining its eligibility as a qualified institutional buyer. Also, a fund's board of directors was permitted to determine whether 144A securities were liquid and thus not subject to the 10 percent limit on fund holdings of illiquid securities that was then in place. (The limit has since been raised to 15 percent.) Before this authorization, mutual funds were required to classify all private placements as illiquid securities.

30. "Fund Managers Petition SEC for Share of the 144A Wealth," *Private Placement Reporter* (August 10, 1992), p. 6.

31. Vachon, "Too Much Cash," p. 23.stors.

Prospects

Further development and growth of the 144A market appear likely because it has filled a gap in U.S. capital markets. The public corporate bond market serves large, well-known borrowers that do not require lenders to perform extensive credit analyses, whereas the traditional private market serves less well known, medium-sized borrowers that require extensive credit analysis. Before the adoption of Rule 144A, no market was able to accommodate large issuers wishing to avoid public registration but not requiring extensive credit analysis by lenders. These issuers, whether domestic or foreign, were left with no choice (in U.S. markets) but to accept the terms of the private market, which included a relatively large yield premium over public bond rates.

The 144A market bridges the gap between the public and traditional private markets and, in this sense, is a new bond market. Whether the need for such a market extends much beyond current levels of activity is an open question. There is little prospect that the medium-sized, information-problematic firms that issue in the traditional market will move to the 144A market. Such firms must borrow from a financial intermediary with the capacity to undertake substantial credit analysis. Moreover, they may not want their issues to be liquid because significant covenants are often included in traditional private placements, and issuers prefer that such debt remain in the hands of the original lenders in case the covenants must be renegotiated.

The greatest potential for the 144A market perhaps lies in its use by foreign issuers inasmuch as they represent the largest group of borrowers without any previous satisfactory alternative in the United States. If foreign issuance expands significantly, then Rule 144A could prove instrumental in further integrating world capital markets as well as in improving the competitive position of U.S. markets. Borrowing by large, domestic corporations with specialized requirements seems to offer much less potential, as such situations are relatively rare for most large corporations. Nonetheless, some analysts expect that the public and 144A bond markets will eventually converge, with yields and terms being comparable in the two markets. □